

**Abstract of the Disclosure**

In illustrative embodiments, equivalent network processing of packets is performed at a single node instead of at a large number of special purpose nodes. A single-pass pipelined packet scan at the single node permits required actions to be taken in an integrated manner to avoid repetitive processing. Processing is conveniently accomplished in separate stateless and stateful segments, with state-related information derived during the stateless packet scan segment tagged to processed packets as required for subsequent stateful processing.

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